

REMARKS

Claims 1-9 and 11-24 are pending. The Examiner's reconsideration of the rejections is requested in view of the amendments and remarks.

Claims 1, 9, and 14 are the independent claims.

Claim 1 has been rejected under 35 U.S.C. 102(e) as being anticipated by Sandstrom et al. (USPN 6,700,600). The Examiner stated essentially that Sandstrom teaches all the limitations of Claim 1.

Claim 1 claims, "disposing a mask including a pattern shape over the layer formed on a substrate; and scanning the mask with the light, such that a direction of the scanning is substantially perpendicular to a longitudinal direction of the pattern shape to form a pattern."

Sandstrom teaches a system for microlithographic writing and inspection on photosensitive substrates comprising a substrate table moving in one direction during a writing process and a laser beam moving in another direction at the same time (see Abstract and col. 5, lines 23-36). Sandstrom further teaches that the microlithographic writing may be used to make a photomask (see Abstract). Sandstrom does not teach "disposing a mask including a pattern shape over the layer formed on a substrate; and scanning the mask with the light, such that a direction of the scanning is substantially perpendicular to a longitudinal direction of the pattern shape to form a pattern" as claimed in Claim 1. Sandstrom teaches that the laser is modulated to produce the pattern (see col. 1, lines 28-34 and col. 2, lines 18-22). Merely manufacturing a photomask using a modulated laser is not analogous to exposing a layer using a mask - Sandstrom does not teach the use of a mask, much less "scanning the mask with the light, such that a direction of the scanning is substantially perpendicular to a longitudinal direction of the pattern shape to form a

pattern" as claimed in Claim 1. Therefore, Sandstrom fails to teach all the limitations of Claim 1.

Therefore, Sandstrom fails to teach all the limitations of Claim 1. The Examiner's reconsideration of the rejection is respectfully requested.

Claims 2-4 have been rejected under 35 U.S.C. 103(a) as being unpatentable over Sandstrom in view of Isobe et al. (U.S. Patent Application No. 2003/0218169). The Examiner stated essentially that the combined teachings of Sandstrom and Isobe teach or suggest all the limitations of Claims 2-4.

Claims 2-4 depend from Claim 1. The dependent claims are believed to be allowable for at least the reasons given for Claim 1.

Claims 5, 6, and 8 have been rejected under 35 U.S.C. 103(a) as being unpatentable over Sandstrom in view of Isobe, and further in view of Kim (U.S. Patent Application No. 2003/0211404). The Examiner stated essentially that the combined teachings of Sandstrom, Isobe and Kim teach or suggest all the limitations of Claims 5, 6, and 8.

Claims 5, 6, and 8 depend from Claim 1. The dependent claims are believed to be allowable for at least the reasons given for Claim 1. Reconsideration of the rejection is respectfully requested.

Claim 7 has been rejected under 35 U.S.C. 103(a) as being unpatentable over Sandstrom in view of Isobe and further in view of Tanuma et al. (USPN 5,718,839). The Examiner stated essentially that the combined teachings of Sandstrom, Isobe and Tanuma teach or suggest all the limitations of Claim 7.

Claim 7 depends from Claim 1. Claim 7 is believed to be allowable for at least the reasons given for Claim 1. Reconsideration of the rejection is respectfully requested.

Claims 9, 10, 14, 15, and 19 have been rejected under 35 U.S.C. 103(a) as being unpatentable over Yang (U.S. Patent Application No. 2003/0213966) in view of Sandstrom. The Examiner stated essentially that the combined teachings of Yang and Sandstrom teach of suggest all the limitations of Claims 9, 10, 14, 15, and 19.

Claim 9 claims, *inter alia*, “disposing a mask including a pattern shape over the photoresist layer formed on the substrate; scanning the mask with a light, such that a direction of the scanning is substantially perpendicular to a longitudinal direction of the pattern shape of the mask to expose the photoresist layer.” Claim 14 claims, *inter alia*, “forming a photosensitive layer pattern by scanning with a light through a mask, wherein a direction of scanning is substantially perpendicular to a longitudinal direction of a data line to be formed during an exposure process, and the photosensitive layer pattern includes a first portion, a second portion thicker than the first portion, and a third portion thinner than the first portion.”

Yang teaches a process for vapor depositing a low dielectric insulating film (see Abstract). As noted in the Office Action, Yang does not disclose scanning substantially perpendicular to a longitudinal direction of the pattern shape to expose the photoresist layer. Nowhere does Yang teach or suggest “scanning the mask with a light, such that a direction of the scanning is substantially perpendicular to a longitudinal direction of the pattern shape of the mask to expose the photoresist layer” as claimed in Claim 9, nor “forming a photosensitive layer pattern by scanning with a light through a mask, wherein a direction of scanning is substantially perpendicular to a longitudinal direction of a data line to be formed during

an exposure process" as claimed in Claim 14. Therefore, Yang fails to teach or suggest all the limitations of Claims 9 and 14.

Sandstrom teaches a system comprising a substrate table moving in one direction during a writing process and a laser beam moving in another direction at the same time (see col. 5, lines 23-36). Sandstrom does not teach "disposing a mask including a pattern shape over the layer formed on a substrate; and scanning the mask with the light, such that a direction of the scanning is substantially perpendicular to a longitudinal direction of the pattern shape to form a pattern" as claimed in Claim 1. Sandstrom teaches that the laser is modulated to produce the pattern (see col. 1, lines 28-34 and col. 2, lines 18-22). Sandstrom does not teach the use of a mask, essentially as claimed in Claims 9 and 14. Further, merely teaching a direction of a substrate table relative to a direction of a laser fails to how a longitudinal direction of a pattern shape of a mask may be disposed with respect to either the substrate table or the laser. Therefore, Sandstrom fails to cure the deficiencies of Yang.

The combined teachings of Yang and Sandstrom fail to teach or suggest "scanning the mask with a light, such that a direction of the scanning is substantially perpendicular to a longitudinal direction of the pattern shape of the mask to expose the photoresist layer" as claimed in Claim 9, nor "forming a photosensitive layer pattern by scanning with a light through a mask, wherein a direction of scanning is substantially perpendicular to a longitudinal direction of a data line to be formed during an exposure process" as claimed in Claim 14. Therefore, the combined teachings of Yang and Sandstrom fail to teach or suggest all the limitations of Claims 9 and 14.

Claims 15 and 19 depend from Claim 14. The dependent claims are believed to be allowable for at least the reasons given for Claim 14. Claim 10 has been cancelled. Reconsideration of the rejection is respectfully requested.

Claims 11 and 16 have been rejected under 35 U.S.C. 103(a) as being unpatentable over Yang in view of Sandstrom and further in view of Tanuma. The Examiner stated essentially that the combined teachings of Yang, Sandstrom, and Tanuma teach of suggest all the limitations of Claims 11 and 16.

Claims 11 and 16 depend from Claims 9 and 14, respectively. The dependent claims are believed to be allowable for at least the reasons given for Claims 9 and 14. Reconsideration of the rejection is respectfully requested.

Claims 12, 13, 17, and 18 have been rejected under 35 U.S.C. 103(a) as being unpatentable over Yang in view of Sandstrom and further in view of Kim. The Examiner stated essentially that the combined teachings of Yang, Sandstrom, and Kim teach of suggest all the limitations of Claims 12, 13, 17, and 18.

Claims 12 and 13 depend from Claim 9. Claims 17 and 18 depend from Claim 14. The dependent claims are believed to be allowable for at least the reasons given for Claims 9 and 14. Reconsideration of the rejection is respectfully requested.

Claims 20-24 depend from Claim 9. The dependent claims are believed to be allowable for at least the reasons given for Claim 9.

For the forgoing reasons, the present application, including Claims 1-9 and 11-24, is believed to be in condition for allowance. The Examiner's early and favorable action is respectfully urged.

Respectfully submitted,

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